

Patent Application  
Docket No. 10004410-1  
47429-00028USPT

Amendments to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application:

1           1. (currently amended) A method of fabricating an ion optic device comprising the  
2 steps of:  
3           shaping a ceramic material such that the ceramic material has a cavity, the ceramic  
4 material being ~~into~~ at least a portion of the ion optic device; and  
5           covering at least a portion of the cavity shaped ceramic material with at least one  
6 material selected from a group consisting of a conductive material and a resistive material;  
7 and  
8           removing a portion of the covering material from said cavity.

1           2. (canceled)

1           3. (original) The method of claim 1 wherein the ceramic material is a material  
2 selected from the group consisting of a ceramic, a glass, and a glass-ceramic.

1           4. (original) The method of claim 1 wherein the conductive material is metal.

1           5. (currently amended) The method of claim 2 1 wherein ~~the step of shaping the a~~  
2 ceramic material comprises providing the cavity being substantially shaped a substantially as  
3 a cylindrical bore in the ceramic material; and  
4           wherein ~~the step~~ of removing a portion of the covering material comprises  
5 removing at least two portions of the covering material on opposing surfaces of the interior of  
6 the bore to create at least two separate, opposing areas of covering material.

Patent Application  
Docket No. 10004410-1  
47429-00028USPT

1           6. (currently amended) The method of claim 1 2 wherein ~~the step of shaping a~~  
2 ~~ceramic material comprises providing a cavity in the ceramic material; and~~  
3 ~~wherein the step of removing a portion of the covering material comprises removing~~  
4 at least one portion of the covering material circumscribing the interior perimeter of the  
5 cavity to create at least two substantially parallel bands of conductivity on an inner surface of  
6 the cavity.

1           7. (original) The method of claim 6 wherein the cavity extends through the ceramic  
2 material; and  
3                 further comprising the step of attaching a conductive grid over one end of the  
4 cavity.

1           8. (currently amended) The method of claim 6 further comprising ~~the step of~~  
2 separating the ceramic material into a first portion and a second portion; and  
3                 joining the first portion and the second portion back together with a  
4 conductive grid therebetween.

1           9. (currently amended) The method of claim 1 2 wherein ~~the step of shaping~~ [[a]] the  
2 ceramic material comprises providing a blind end in the [[a]] cavity ~~having a blind end in the~~  
3 ~~ceramic material; and~~  
4                 wherein ~~the step of covering~~ at least a portion of the shaped ceramic material  
5 with at least one covering material comprises covering at least a portion of the blind end in  
6 the interior of the cavity with a conductive material.

Patent Application  
Docket No. 10004410-1  
47429-00028USPT

1 10. (currently amended) An ion optic device for manipulating ions in a vacuum,  
2 comprising:

3 a ceramic substrate having a cavity therein, said cavity is substantially a first  
4 cylindrical bore; and

5 a conductive coating on at least two separate areas on opposing surfaces of the  
6 first cylindrical bore, wherein the at least two separate areas of conductive coating are  
7 separated by a secondary bore having an axis parallel to the first cylindrical bore ~~a portion of~~  
8 ~~an interior surface of the cavity, the conductive coating provided for receiving an applied~~  
9 ~~voltage to act upon the ions.~~

1 11. (canceled)

1 12. (canceled)

1 13. (canceled)

1 14. (canceled)

1 15. (currently amended) The device of claim ~~10~~ 19 wherein the cavity has an open  
2 end and the device further comprises a conductive grid attached to the ceramic substrate over  
3 the open end.

1 16. (currently amended) The device of claim ~~10~~ 19 wherein the ceramic substrate is  
2 provided in at least two portions and a conductive grid is provided between the two portions.

Patent Application  
Docket No. 10004410-1  
47429-00028USPT

1 17. (original) The device of claim 10 wherein the ceramic is a glass-ceramic.

1 18. (currently amended) The device of claim 10 19 wherein the cavity has an open  
2 end and the device further comprises an electrode member attached to the ceramic substrate  
3 over the open end.

1 19. (new) An ion optic device for manipulating ions in a vacuum, comprising:  
2 a ceramic substrate having a cavity therein, said cavity having a blind end; and  
3 a conductive coating substantially covering the interior surface of the blind end,  
4 said conductive coating further provided in at least two separate bands circumscribing the  
5 cavity.

1 20. (new) The device of claim 19 wherein the ceramic substrate is a glass-ceramic.